The Life Cycle of a Bank Enforcement Action and Its Impact on Minority Lending

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The views expressed in this presentation are those of the authors and do not necessarily reflect the views of the Federal Reserve Board or the Federal Reserve System.
Motivation

- Mortgage lending is a large consumer finance market
  - Outstanding loan amounts of around $10 trillion in 2019 [NYFRB, 2020]

- Homeownership conveys important social and economic benefits
  - Homeownership tied to intergenerational wealth transfers, explains wealth gap between whites and minorities [Blau Graham (1990); Collins Margo (2001); Di et al. (2007); Newman Holupka (2016); Shapiro (2006); Wainer Zabel (2020)]
  - Children of homeowners have higher educational attainment, lower likelihood of incarceration [Aaronson (2000); Green et al. (1997)]
Motivation

• Despite over 50 years of legislative initiatives, mortgage lending discrimination remains an important issue and the subject of ongoing research and policy considerations.

• Although algorithmic lenders have reduced disparity, the issue of discrimination in mortgage lending remains [Bartlett et al., (2019)].

• We aim to understand the special role that bank regulators and supervisors play in shaping banks’ lending decisions with respect to minority borrowers.
Research Question

• How does the supervisory enforcement process affect banks’ borrower base in residential mortgage lending, specifically with respect to minority borrowers?

• What mechanisms drive the change?
Bank Enforcement Actions

- Enforcement decisions and orders (EDOs) have been issued by bank regulators since 1966 (FISA)

- Disclosed since August 9, 1989 (FIRREA)
  - Measure of last resort
  - Force banks to take corrective actions
  - We focus on the most severe types: Cease and Desist (C&D), Formal or Supervisory Agreements, Consent Orders, Prompt Corrective Actions (PCA)
Enforcement Actions are Disruptive for Banks

- EDOs force banks to cut risky lending, change management, increase capital and provisions, and improve internal control systems.

- We find that deposits and deposit market shares decline during an EDO, revert thereafter.
  - Sample banks rely heavily on deposit funding (loan to deposit ratio of 0.79).

- We find a corresponding decline in total loans and commercial loans.
  - Surprisingly, we find no significant decline in residential mortgages.
**EDO Banks Increase Lending to Minorities**

- Expand geographic footprint in lending to minorities (defined as non-white borrowers)
- Increase in minority lending is not driven by expansion into majority-minority counties

<table>
<thead>
<tr>
<th></th>
<th>Average number of distinct counties where EDO banks are active</th>
<th>Average number of distinct counties where EDO banks lend to minorities</th>
<th>Of which: minority population greater than 50% of county population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre EDO (year -3)</td>
<td>22</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Pre EDO (year -2)</td>
<td>22</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Pre EDO (year -1)</td>
<td>22</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>During EDO (annualized, on average)</td>
<td>21</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Post EDO (year 1)</td>
<td>25</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Post EDO (year 2)</td>
<td>27</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Post EDO (year 3)</td>
<td>29</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Post EDO (year 4)</td>
<td>31</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Post EDO (year 5)</td>
<td>31</td>
<td>11</td>
<td>4</td>
</tr>
</tbody>
</table>
EDO Banks Increase Lending to Minorities

- Portfolio share of lending to minorities increases by 2.5%–6.0% (mean: 6.5%)

- County-level market share in mortgage lending to minorities increases by 0.87%–1.41% (mean: 0.41%)

<table>
<thead>
<tr>
<th></th>
<th>Portfolio shares of residential mortgage loans to minorities</th>
<th>Market shares of residential mortgage loans to minorities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td><strong>During EDO</strong></td>
<td>-1.380**</td>
<td>-0.074</td>
</tr>
<tr>
<td></td>
<td>(-2.269)</td>
<td>(-1.612)</td>
</tr>
<tr>
<td><strong>Post EDO (year 1)</strong></td>
<td>1.010</td>
<td>0.916***</td>
</tr>
<tr>
<td></td>
<td>(1.222)</td>
<td>(14.342)</td>
</tr>
<tr>
<td><strong>Post EDO (year 2)</strong></td>
<td>2.474***</td>
<td>0.947***</td>
</tr>
<tr>
<td></td>
<td>(3.050)</td>
<td>(15.085)</td>
</tr>
<tr>
<td><strong>Post EDO (year 3)</strong></td>
<td>1.177</td>
<td>0.869***</td>
</tr>
<tr>
<td></td>
<td>(1.477)</td>
<td>(13.958)</td>
</tr>
<tr>
<td><strong>Post EDO (year 4)</strong></td>
<td>4.423***</td>
<td>1.133***</td>
</tr>
<tr>
<td></td>
<td>(5.476)</td>
<td>(18.202)</td>
</tr>
<tr>
<td><strong>Post EDO (year 5)</strong></td>
<td>6.046***</td>
<td>1.413***</td>
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<tr>
<td></td>
<td>(7.334)</td>
<td>(21.971)</td>
</tr>
</tbody>
</table>

Observations: 162,760
Wald $\chi^2$: 414***
Estimation method: RE Tobit
Controls: Yes
Year, County, Bank RE: Yes
Years: 1994–2018
• Empirical challenge: EDOs are not randomly assigned
  • We study changes in county-level market shares: EDO banks expand lending to minorities relative to all banks in a county
  • EDOs are staggered in time and vary by geography
  • Controls for bank characteristics, county-level employment growth, year and bank effects
  • Robustness: Control samples of non-EDO banks matched on bank characteristics, and non-EDO banks randomly selected by year and geography
EDO Banks Increase Lending to Minorities

• Decline in loan application denials
  • Pre-EDO: minority borrowers are 11% more likely to be denied a mortgage relative to white borrowers
  • Post-EDO: denials for minorities falls by half
  • Decline in denials driven by less risky refinancing and home equity loans
    • Drop in denials unlikely to translate to a corresponding increase in homeownership

• Less reliance on nonprice terms
  • Nonprice terms used by banks to ration credit
  • Minorities more likely to be constrained by such terms
  • Post-EDO: minorities are 0.86% less likely to be rejected for a mortgage due to their credit history
No Increase in Portfolio Risk Post-EDO Termination

• Decline in total nonperforming assets
• Decline in nonperforming residential mortgage loans
• No change in share of risky loans in total residential mortgage loans at the county-level
  • Risky loans are higher-priced closed-end mortgages
Our Findings Thus Far...

- EDO banks face disruptions in deposit-generating and lending abilities

- The decline in loans does not extend to EDO banks’ residential mortgage portfolio
  - Portfolio and county-level market shares of loans to minorities increase
  - Decline in denials of mortgage applications from minorities
    - Driven by less risky refinancing and home equity loans
  - Less reliance on nonprice terms
  - No increase in riskiness of loans
Why Do Banks Increase Lending to Minority Borrowers Post EDO Termination?

1. Improvements at the bank: remedy issues
   - E.g., violation of fair lending laws
   - Review and update risk assessment procedures (e.g., use additional sources of information)

2. Manage Capital Ratios: residential mortgages have lower risk weights

3. Cater to regulators to gain future leniency
   - EDO banks lose credibility with their regulators: invite greater scrutiny in the future
   - Regulators may exercise forbearance towards banks that lend to minorities

4. Increase in competition from non-EDO banks may cause expansion to previously underserved borrowers
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4. **Increase in competition from non-EDO banks may cause expansion to previously underserved borrowers**
Evidence: Improvements due to the Enforcement Process

• Banks less likely to deny credit based on nonprice terms following EDO termination suggests changes in credit assessment procedures.

• No increase in riskiness of loans post EDO termination.

• EDO banks that are more likely to witness greater improvements increase lending to minorities more.
  • Banks in states with stricter regulators.
  • Banks that received more severe EDOs (length of time to exit the EDO).
Evidence: Catering to Regulators

- Banks with stricter regulators and more severe EDOs also have greater incentives to cater.
- Banks with low CRA ratings in the pre-EDO period increase lending to minorities more.
  - The Community Reinvestment Act was enacted by Congress in 1977 to encourage credit availability in low and moderate-income areas.
  - Banks need to maintain a satisfactory CRA rating if they plan to expand or make any substantial changes to their operations.
Summary and Conclusions

• Explore the impact of supervision and enforcement on bank borrower base
  • EDO banks increase lending to minority communities following EDO termination
  • Evidence consistent with improvements due to the enforcement process, and banks’ catering to regulators

• Increase in lending driven by less risky refinancing and home equity loans
  • Unlikely to lead to a corresponding rise in homeownership among minority communities